

## SEQUENCE LISTING

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Mutant p53 Proteins And Uses Thereof

&lt;130&gt;

D6454CIP

&lt;140&gt;

<141> 2003-10-29  
<150> US 10/444,287  
<151> 2003-05-23

&lt;160&gt;

9

&lt;210&gt;

1

&lt;211&gt;

1161

&lt;212&gt;

DNA

&lt;213&gt;

*Homo sapiens*

&lt;220&gt;

&lt;221&gt;

mat\_peptide

&lt;223&gt;

cDNA sequence of mutant p53 ( $\Delta$ 126-132)

&lt;400&gt;

1

atggaggagc	cgcagtca	tcctagcg	tc	gagccccc	t	tgagtca	gga	50
aacattttca	gac	ctatgg	aactacttcc	t	gaaaaca	ac	gttctgtccc	100
ccttgcgc	tc	caagcaat	gatgattg	t	g	ctgtcccc	ggacgat	150
gaacaatgg	t	ca	ctgaaga	ccc	agg	tcca	gatgaag	200
agaggctg	c	cccccgt	gg	ccc	ctgcacc	agcag	ctc	250
ccctgcacc	ag	ccccctcc	tggccc	ctgt	catcttct	gt	cccttccc	300
aaaacctacc	agg	ggcag	cta	cgttcc	gt	gggttct	tgcatt	350
gacagccaa	t	ctgtgact	t	gcac	gtt	ccaaact	g	400
gccctgtg	c	gtgtgg	tt	tttcc	acac	cccc	ccccgg	450
cgcgc	ccat	gttac	aa	gc	agtc	ca	ac	500
gcgc	ct	ccatg	agc	gt	tc	at	cc	550
ctc	agc	atct	tatccg	act	gtt	tttcc	gtt	600
gac	agaa	aca	ctttcg	tagt	gtt	ccat	atg	650
g	tttgg	gct	tacca	ccat	cc	actacat	tgta	700
c	gg	cat	gaa	cc	tc	tat	acag	750
ga	agact	cca	gtgt	gg	tc	ttt	gttgc	800
tt	gttgc	c	aatct	act	cc	tttgc	atgt	850
ag	aaaagg	ga	ggag	gg	cc	atctcc	cgca	900
ct	ccca	aca	cc	ac	cc	aaaaga	aacc	950
t	ggaga	at	tcc	at	cc	actg	tgga	1000
tcc	gag	at	tcc	at	cc	ttc	gagat	1050
gag	ccagg	gg	atgagg	cc	gg	tc	gggaa	1100
tca	gtt	ccat	tt	actcc	cc	act	ccaa	1150
tc	act	ccata	aaa	act	cc	cat	gttca	1161
act	ca	gact	g	tt	cc	act	gaca	
			a					

<210> 2  
<211> 386  
<212> PRT  
<213> *Homo sapiens*

<220>

<221> PEPTIDE  
<223> mutant p53 ( $\Delta$ 126-132)

<400> 2

Met Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser  
5 10 15  
Gln Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn  
20 25 30  
Val Leu Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu  
35 40 45  
Ser Pro Asp Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro  
50 55 60  
Asp Glu Ala Pro Arg Met Pro Glu Ala Ala Pro Pro Val Ala Pro  
65 70 75  
Ala Pro Ala Ala Pro Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser  
80 85 90  
Trp Pro Leu Ser Ser Val Pro Ser Gln Lys Thr Tyr Gln Gly  
95 100 105  
Ser Tyr Gly Phe Arg Leu Gly Phe Leu His Ser Gly Thr Ala Lys  
110 115 120  
Ser Val Thr Cys Thr Met Phe Cys Gln Leu Ala Lys Thr Cys Pro  
125 130 135  
Val Gln Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val  
140 145 150  
Arg Ala Met Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val  
155 160 165  
Val Arg Arg Cys Pro His His Glu Arg Cys Ser Asp Ser Asp Gly  
170 175 180  
Leu Ala Pro Pro Gln His Leu Ile Arg Val Glu Gly Asn Leu Arg  
185 190 195  
Val Glu Tyr Leu Asp Asp Arg Asn Thr Phe Arg His Ser Val Val  
200 205 210  
Val Pro Tyr Glu Pro Pro Glu Val Gly Ser Asp Cys Thr Thr Ile  
215 220 225  
His Tyr Asn Tyr Met Cys Asn Ser Ser Cys Met Gly Gly Met Asn  
230 235 240  
Arg Arg Pro Ile Leu Thr Ile Ile Thr Leu Glu Asp Ser Ser Gly  
245 250 255  
Asn Leu Leu Gly Arg Asn Ser Phe Glu Val His Val Cys Ala Cys  
260 265 270  
Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn Leu Arg Lys Lys  
275 280 285  
Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr Lys Arg Ala  
290 295 300  
Leu Pro Asn Asn Thr Ser Ser Pro Gln Pro Lys Lys Lys Pro

	305	310	315
Leu Asp Gly Glu	Tyr Phe Thr Leu Gln	Ile Arg Gly Arg Glu Arg	
320	325	330	
Phe Glu Met Phe Arg	Glu Leu Asn Glu	Ala Leu Glu Leu Lys Asp	
335	340	345	
Ala Gln Ala Gly	Lys Glu Pro Gly Gly	Ser Arg Ala His Ser Ser	
350	355	360	
His Leu Lys Ser	Lys Gly Gln Ser	Thr Ser Arg His Lys Lys	
365	370	375	
Leu Met Phe Lys	Thr Glu Gly Pro Asp	Ser Asp	
380	385		

<210> 3  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<221> primer\_bind  
<223> sense primer for p53

<400> 3

atggaggagc cgcaagtca t 21

<210> 4  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<221> primer\_bind  
<223> anti-sense primer for p53

<400> 4

tcagtctgag tcaggccctt c 21

<210> 5  
<211> 60  
<212> DNA  
<213> Artificial Sequence

<220>

<221> primer\_bind  
<223> sense primer for p53, encoding an EcoRI restriction enzyme cutting site, starting codon, HA residue, and p53 sequence from 4-21 nucleotide bases

<400> 5

cgcgaattca tgtatgtatgt tcctgattat gctagcctcg aggagccgca 50

gtcagatcct 60

<210> 6  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>

<221> primer\_bind  
<223> anti-sense primer for p53, containing a BamHI restriction enzyme cutting site and stop codon

<400> 6

cgcggatcct cagtctgagt caggcccttc 30

<210> 7  
<211> 393  
<212> PRT  
<213> *Homo sapiens*

<220>

<221> PEPTIDE  
<223> wild-type p53

<400> 7

Met	Glu	Glu	Pro	Gln	Ser	Asp	Pro	Ser	Val	Glu	Pro	Pro	Leu	Ser
										5		10		15
Gln	Glu	Thr	Phe	Ser	Asp	Leu	Trp	Lys	Leu	Leu	Pro	Glu	Asn	Asn
										20		25		30
Val	Leu	Ser	Pro	Leu	Pro	Ser	Gln	Ala	Met	Asp	Asp	Leu	Met	Leu
									35		40		45	
Ser	Pro	Asp	Asp	Ile	Glu	Gln	Trp	Phe	Thr	Glu	Asp	Pro	Gly	Pro
									50		55		60	
Asp	Glu	Ala	Pro	Arg	Met	Pro	Glu	Ala	Ala	Pro	Pro	Val	Ala	Pro
									65		70		75	
Ala	Pro	Ala	Ala	Pro	Thr	Pro	Ala	Ala	Pro	Ala	Pro	Ala	Pro	Ser
									80		85		90	
Trp	Pro	Leu	Ser	Ser	Val	Pro	Ser	Gln	Lys	Thr	Tyr	Gln	Gly	
									95		100		105	
Ser	Tyr	Gly	Phe	Arg	Leu	Gly	Phe	Leu	Ser	Gly	Thr	Ala	Lys	
									110		115		120	
Ser	Val	Thr	Cys	Thr	Tyr	Ser	Pro	Ala	Leu	Asn	Lys	Met	Phe	Cys
									125		130		135	
Gln	Leu	Ala	Lys	Thr	Cys	Pro	Val	Gln	Leu	Trp	Val	Asp	Ser	Thr
									140		145		150	
Pro	Pro	Pro	Gly	Thr	Arg	Val	Arg	Ala	Met	Ala	Ile	Tyr	Lys	Gln
									155		160		165	
Ser	Gln	His	Met	Thr	Glu	Val	Val	Arg	Arg	Cys	Pro	His	His	Glu
									170		175		180	
Arg	Cys	Ser	Asp	Ser	Asp	Gly	Leu	Ala	Pro	Pro	Gln	His	Leu	Ile

	185		190		195									
Arg	Val	Glu	Gly	Asn	Leu	Arg	Val	Glu	Tyr	Leu	Asp	Asp	Arg	Asn
				200					205					210
Thr	Phe	Arg	His	Ser	Val	Val	Val	Pro	Tyr	Glu	Pro	Pro	Glu	Val
				215					220					225
Gly	Ser	Asp	Cys	Thr	Thr	Ile	His	Tyr	Asn	Tyr	Met	Cys	Asn	Ser
				230					235					240
Ser	Cys	Met	Gly	Gly	Met	Asn	Arg	Arg	Pro	Ile	Leu	Thr	Ile	Ile
				245					250					255
Thr	Leu	Glu	Asp	Ser	Ser	Gly	Asn	Leu	Leu	Gly	Arg	Asn	Ser	Phe
				260					265					270
Glu	Val	Arg	Val	Cys	Ala	Cys	Pro	Gly	Arg	Asp	Arg	Arg	Thr	Glu
				275					280					285
Glu	Glu	Asn	Leu	Arg	Lys	Lys	Gly	Glu	Pro	His	His	Glu	Leu	Pro
				290					295					300
Pro	Gly	Ser	Thr	Lys	Arg	Ala	Leu	Pro	Asn	Asn	Thr	Ser	Ser	Ser
				305					310					315
Pro	Gln	Pro	Lys	Lys	Lys	Pro	Leu	Asp	Gly	Glu	Tyr	Phe	Thr	Leu
				320					325					330
Gln	Ile	Arg	Gly	Arg	Glu	Arg	Phe	Glu	Met	Phe	Arg	Glu	Leu	Asn
				335					340					345
Glu	Ala	Leu	Glu	Leu	Lys	Asp	Ala	Gln	Ala	Gly	Lys	Glu	Pro	Gly
				350					355					360
Gly	Ser	Arg	Ala	His	Ser	Ser	His	Leu	Lys	Ser	Lys	Lys	Gly	Gln
				365					370					375
Ser	Thr	Ser	Arg	His	Lys	Lys	Leu	Met	Phe	Lys	Thr	Glu	Gly	Pro
				380					385					390
Asp	Ser	Asp												
			393											

<210> 8

<211> 359

<212> PRT

<213> *Homo sapiens*

<220>

<221> PEPTIDE

<223> p53 double mutant ( $\Delta$ 126-132+ $\Delta$ 367-393)

<400> 8

Met	Glu	Glu	Pro	Gln	Ser	Asp	Pro	Ser	Val	Glu	Pro	Pro	Leu	Ser
				5					10					15
Gln	Glu	Thr	Phe	Ser	Asp	Leu	Trp	Lys	Leu	Leu	Pro	Glu	Asn	Asn
				20					25					30
Val	Leu	Ser	Pro	Leu	Pro	Ser	Gln	Ala	Met	Asp	Asp	Leu	Met	Leu
				35					40					45
Ser	Pro	Asp	Asp	Ile	Glu	Gln	Trp	Phe	Thr	Glu	Asp	Pro	Gly	Pro
				50					55					60
Asp	Glu	Ala	Pro	Arg	Met	Pro	Glu	Ala	Ala	Pro	Pro	Val	Ala	Pro
				65					70					75
Ala	Pro	Ala	Ala	Pro	Thr	Pro	Ala	Ala	Pro	Ala	Pro	Ala	Pro	Ser

	80		85		90									
Trp	Pro	Leu	Ser	Ser	Ser	Val	Pro	Ser	Gln	Lys	Thr	Tyr	Gln	Gly
				95					100					105
Ser	Tyr	Gly	Phe	Arg	Leu	Gly	Phe	Leu	Ser	Gly	Thr	Ala	Lys	
				110					115					120
Ser	Val	Thr	Cys	Thr	Met	Phe	Cys	Gln	Leu	Ala	Lys	Thr	Cys	Pro
				125					130					135
Val	Gln	Leu	Trp	Val	Asp	Ser	Thr	Pro	Pro	Pro	Gly	Thr	Arg	Val
				140					145					150
Arg	Ala	Met	Ala	Ile	Tyr	Lys	Gln	Ser	Gln	His	Met	Thr	Glu	Val
				155					160					165
Val	Arg	Arg	Cys	Pro	His	His	Glu	Arg	Cys	Ser	Asp	Ser	Asp	Gly
				170					175					180
Leu	Ala	Pro	Pro	Gln	His	Leu	Ile	Arg	Val	Glu	Gly	Asn	Leu	Arg
				185					190					195
Val	Glu	Tyr	Leu	Asp	Asp	Arg	Asn	Thr	Phe	Arg	His	Ser	Val	Val
				200					205					210
Val	Pro	Tyr	Glu	Pro	Pro	Glu	Val	Gly	Ser	Asp	Cys	Thr	Thr	Ile
				215					220					225
His	Tyr	Asn	Tyr	Met	Cys	Asn	Ser	Ser	Cys	Met	Gly	Gly	Met	Asn
				230					235					240
Arg	Arg	Pro	Ile	Leu	Thr	Ile	Ile	Thr	Leu	Glu	Asp	Ser	Ser	Gly
				245					250					255
Asn	Leu	Leu	Gly	Arg	Asn	Ser	Phe	Glu	Val	Arg	Val	Cys	Ala	Cys
				260					265					270
Pro	Gly	Arg	Asp	Arg	Arg	Thr	Glu	Glu	Glu	Asn	Leu	Arg	Lys	Lys
				275					280					285
Gly	Glu	Pro	His	His	Glu	Leu	Pro	Pro	Gly	Ser	Thr	Lys	Arg	Ala
				290					295					300
Leu	Pro	Asn	Asn	Thr	Ser	Ser	Ser	Pro	Gln	Pro	Lys	Lys	Lys	Pro
				305					310					315
Leu	Asp	Gly	Glu	Tyr	Phe	Thr	Leu	Gln	Ile	Arg	Gly	Arg	Glu	Arg
				320					325					330
Phe	Glu	Met	Phe	Arg	Glu	Leu	Asn	Glu	Ala	Leu	Glu	Leu	Lys	Asp
				335					340					345
Ala	Gln	Ala	Gly	Lys	Glu	Pro	Gly	Gly	Ser	Arg	Ala	His	Ser	
				350					355					359

<210>

9

<211>

30

<212>

DNA

<213>

Artificial Sequence

<220>

<221>

primer\_bind

<223>

anti-sense primer for TM p53 and p53 double mutant

<400>

9

gcgtctagat caggagtgag ccctgctccc

30